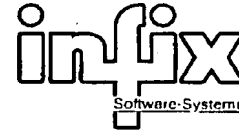Page: 6
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3 Remarks

1. On June 29th 2007, applicant filed an After Final reply, to which an Office action is still outstanding. The arguments presented in that reply remain pending.

   On October 31st 2007, the examiner advised applicant by phone interview that claim 1 might be rejected as it contained an ambiguity caused by two "OR" clauses and indicated favorable action if that ambiguity could be resolved. On the same day, applicant filed a revised amendment which eliminated the "OR" clauses. The arguments presented in that reply remain pending.

   On November 2nd 2007, the examiner advised applicant by phone interview that claim 1 might be rejected since it might be interpreted as claiming a programming framework, essentially comprising a hierarchy of classes with a base class / derived class relationship.

   The present amendment is based on the amendment filed October 31st 2007.

2. Applicant traverses the argument presented on November 2nd 2007. Lacking specific references, applicant is still unaware of any combination of prior art suggesting every feature of claim 1 in its former version. However, applicant herewith presents an amendment, which specifically avoids the feature of a class hierarchy (or other pure type hierarchy) in claim 1.

   The amended claim 1 is reworded to explicitly claim a method to model a contents hierarchy, which not only defines a data structure but also holds its actual data contents, as opposed to a type (or class) hierarchy, which merely defines data structures without providing an integrated means to hold the actual data values of such structures.

   While the core of claim 1 remains essentially unchanged, its language now more explicitly claims a method comprising steps enabling its user to

   a) model such contents hierarchy (creating new levels and inserting elements),

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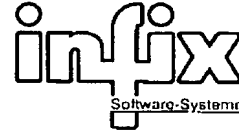
b) edit the contents of its simple data elements (like editing the value of a spreadsheet cell),

c) associate functional expressions with data elements (like adding a spreadsheet formula to a cell),

d) edit such functional expressions (like editing a spreadsheet formula),

and steps to update the contents of data elements with the result of functional expressions by machine-evaluating such expressions (like a spreadsheet updating cells having a formula).

In particular with regard to spreadsheet concepts, the EPO's International Preliminary Examination Report (IPER) of the corresponding PCT application (PCT/EP03/50030) provides a reasoned statement regarding the patentability of the method at the core of claim 1. That statement notes a spreadsheet's "difficult maintainability caused by the loose coupling of related data conditioned by the tabular structure" and concludes that "although hierarchic structures are generally known in computer science, their application to data organisation vis-a-vis the user in the case of calculation methods that work in a similar way to spreadsheet analyses should not be considered obvious to a person skilled in the art."

3. In addition, applicant traverses the rejections of the Final Office Action dated May 2nd 2007.

4. Regarding independent claim 1, Thomsen et al. in view of Simonyi neither discloses nor suggests the feature of "a hierarchy of data elements comprising [...] a plurality of data elements each being able to have an associated functional expression optionally selectable by input means, a plurality of said functional expressions each being able to contain a reference using dynamic binding to refer to the contents of at least one data element different from the data element associated with said functional expression," as recited in claim 1.

The deficiencies in Thomsen's and Simonyi's disclosures and the advantages of a method with the features of claim 1 have been presented in remark number 6 of applicant's reply dated June 29th 2007.

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For at least the foregoing reasons, applicant submits that claim 1 is neither anticipated nor suggested by Thomsen in view of Simonyi.

5. The amended claims 3, 4 and 7 are adapted to the language of the amended claim 1. Claims 3-10 and 12-14 depend from claim 1. Therefore, these claims are neither anticipated nor suggested by Thomsen in view of Simonyi for at least the reasons given above with respect to claim 1. Moreover, these claims recite additional features not disclosed or suggested by Thomsen in view of Simonyi.

6. Regarding claim 3, Thomsen in view of Simonyi does not disclose the feature wherein "said hierarchy of data elements is an object hierarchy and the method further comprises means to store, model and output a hierarchy of classes, each class being associated with a plurality of said data elements and said class comprising a specification of the common configuration and properties of a plurality of said data elements separately from said data elements' individual contents".

    Thomsen does not disclose or suggest modeling a class hierarchy specifying the configuration of the methods elements (nodes). Simonyi does not remedy that deficiency.

    The deficiencies in Thomsen's and Simonyi's disclosures and the advantages of a method with the features of claim 3 have been presented in remark number 8 of applicant's reply dated June 29th 2007.

7. Regarding claim 4, Thomsen in view of Simonyi does not disclose or suggest a "steps to select different output and editing modes for data elements depending on parameters, and steps to manipulate said parameters". Such parameters would have to be differentiated from an element (node) itself and the element's contents (input and output variables), which neither Thomsen nor Simonyi discloses or suggests.

8. Arguments regarding claims 5-10 and 13 have been presented in remarks number 10-15 and 16 of applicant's reply dated June 29th 2007.

9. The description is amended to provide definitions for terms used in claim 1.

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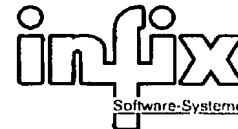
The reason for stating that a simple contents member of a data element may be logically, but not physically present lies in the fact that, for data elements associated with a functional expression, the expression result may be determined and used each time the contents are accessed and discarded afterwards.

The term simple contents is defined in a way that it includes types of contents, which may be hierarchically structured internally (e.g. via programming languages outside the scope of this method), but don't have said data elements accessible to the modeling part of this method.

10. Drawings:

A replacement for drawing sheet 1 is provided to correct two errors in Fig. 1:

a) The arrow pointing to the empty box to the right of the box "Elementary Structures" should be labeled 6, not 3.

b) The line connecting to the top side of the empty box to the left of arrow #7 should be labeled 3, not 6.

The drawing preferred for the front page is Fig. 3, not Fig. 4.

11. In view of the foregoing remarks, applicant requests the reconsideration of this application and the timely allowance of the pending claims.

4 Correspondence Information

12. The applicant's telephone number as dialed from the United States is 011 49 40 59456481. The applicant can normally be reached on 4:00 am – 1:00 pm (US Eastern Time Zone). The applicant's fax number as dialed from the United States is 011 49 721 151318949. Applicant has agreed to be contacted by e-mail using the address oliver.okrongli@infix.de.
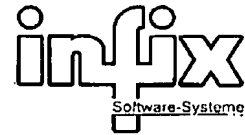
Submitted,

Oliver Okrongli
Applicant

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Date: 03. December 2007

Annex:

- Drawings Replacement Sheet 1